



PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name	
PO040159	ACI001-VC	1	1	Net 30	MT-A500-TR-1.500X1.000W0.125	Steel Rectangular Tubing 1.500""H X 1.000""W X 0.125""T : MATERIAL: ASTM A500 STEEL SQUARE TUBING SPECIFICATION: ASTM A500 OR ASTM A513				24	6/25/2018	24		S082796	Stock	6/20/2018	\$ 1.73 / ft	0		\$41.42	Acier Ouellette Inc.	
		2			MT-4140-S-3.000X8.000	AISI 4140 / 4142 Steel Plate 3.000""T X 8.000""W SPECIFICATION: AISI 4140 / 4142 STEEL SHEET OR PLATE ASTM A829, AMS 6395 MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc						24		S082797	Stock	6/20/2018	\$ 204.20 / ft	0		\$4,900.80	Acier Ouellette Inc.	
		3			MT-4140-R2.000	AISI 4140 Round Bar : MAT""L, AISI 4140 ROUND BAR MINIMUM ROCKWELL C = 20 Rc MAXIMUM ROCKWELL C = 38 Rc SPECIFICATION: ASTM A29, AMS 6349, AMS 6382, AMS 6529				12		12		S082798	Stock	6/20/2018	\$ 22.64 / ft	0		\$271.64	Acier Ouellette Inc.	
		4			MT-HRS-B-2.500WX3.500H	Hot Rolled Steel Bar 2.500W X 3.500H MATERIAL: HOT ROLLED STEEL PLATE ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018				3		3		S082799	Stock	6/20/2018	\$ 39.80 / ft	0		\$119.40	Acier Ouellette Inc.	
		5			M6061T6R7.000	6061-T6 Round Bar 7.000"" (CUT TO SIZE: 7.125""") : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft					6		6		S082800	Stock	6/20/2018	\$ 212.45 / ft	0		\$1,261.97	Acier Ouellette Inc.
		6			M304S20GA	304/316 .040 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 receive sf				128		128		S082801	Stock	6/20/2018	\$ 5.27 / sf	0		\$674.93	Acier Ouellette Inc.	

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
					M5052H32S.063	5052-H32 .063 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf				64		64	S082802	Stock	6/20/2018	\$ 5.91 / sf	0		\$378.25	Acier Ouellette Inc.	
					M304R0.375	304 Round Bar 0.375 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft				12		12	S082803	Stock	6/20/2018	\$ 1.19 / ft	0		\$14.30	Acier Ouellette Inc.	
					M303R0.500	303 Round Bar 0.500" : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE:304/316 NOT ACCEPTABLE receive ft				72		72	S082804	Stock	6/20/2018	\$ 2.34 / ft	0		\$168.54	Acier Ouellette Inc.	
					M303R0.750	303 Round Bar 0.750 : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE:304/316 NOT ACCEPTABLE receive ft						72	S082805	Stock	6/20/2018	\$ 5.14 / ft	0		\$369.80	Acier Ouellette Inc.	
										Total:	417	417									\$6,166.39

Plex 6/20/2018 3:24 PM dart.Tollis.Andrew



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

PURCHASE ORDER PO040159

Tel (613) 632-5200

Supplier:

AC1001-VC
Acier Ouellette Inc.
935 Boul. Du Havre
Valleyfield
QC
J6S 5L1 Canada
Phone: 800 667 4248
Fax: 450 377 5696

PO No.:

PO040159

PO Date:

6/11/18

Due Date:

6/21/18

Purchase Order Revision:

E-MAILED
JUN 11 2018

Revision Date:

Ship-To Contact:

Lavoie, Chantal iPhone:
clavoie@dartaero.com

Ship To:

1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via:

Ground

Pymt Terms:

Net 30

Freight Terms:

Special Comments: quote no. sou0111706

Items

Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	MT-A500-TR-1.500X1.000W0.125		Steel Rectangular Tubing 1.500"H X 1.000"W X 0.125" T	Filed	6/14/18	24 ft	0 ft	24 ft	\$17.25833/ft	\$41.42
2	MT-4140-S-3.000X8.000		AISI 4140 / 4142 Steel Plate 3.000" T X 8.000" W	Filed	6/21/18	24 ft	0 ft	24 ft	\$204.20/ft	\$4,900.80
3	MT-4140-R2.000		SPECIFICATION: AISI 4140 / 4142 STEEL SHEET OR PLATE ASTM A829, AMS 6395 MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc AISI 4140 Round Bar : MAT TM , AISI 4140 ROUND BAR MINIMUM ROCKWELL C = 20 Rc MAXIMUM ROCKWELL C = 38 Rc SPECIFICATION: ASTM A29, AMS 6349, AMS 6382, AMS 6529	Filed	6/14/18	12 ft	0 ft	12 ft	\$22.63667/ft	\$271.64

Items											
Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price	
4	MT-HRS-B-2.500X3.500		Hot Rolled Steel Bar 2.500W X 3.500H	Flirmed	6/21/18	3 ft	3 ft	0 ft	\$39.80/ft	\$119.40	
5	M606T1T6R7.000		7.000" (CUT TO SIZE: 7.125") : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Flirmed	6/21/18	5.938 ft	5.938 ft	0 ft	6 ft	\$212.45305/ft	\$1,261.55
6	M304S20GA		304/316 .040 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 receive sf	Flirmed	6/14/18	128 sf	128 sf	0 sf	128 sf	\$5.2728906/sf	\$674.93
7	M5052H32S.063		5052-H32 .063 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf	Flirmed	6/15/18	64 sf	64 sf	0 sf	64 sf	\$5.9101562/sf	\$378.25
8	M304R0.375		304 Round Bar 0.375 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Flirmed	6/14/18	12 ft	12 ft	0 ft	12 ft	\$1.191666/ft	\$14.30
9	M303R0.500		303 Round Bar 0.500" : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE:304/316 NOT ACCEPTABLE receive ft	Flirmed	6/14/18	72 ft	72 ft	0 ft	72 ft	\$2.3408333/ft	\$168.54
10	M303R0.750		303 Round Bar 0.750 : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE:304/316 NOT ACCEPTABLE receive ft	Flirmed	6/21/18	72 ft	72 ft	0 ft	72 ft	\$5.13611/ft	\$369.80

Order Notes

Rec'd At 180620

Grand Total: \$3,200.63

Order Notes
<p>Procurement Quality Clauses</p> <p>A005 right of entry</p> <p>A012 chemical and physical test report</p> <p>A016 personnel qualification</p> <p>A017 raw material identification (as applicable)</p> <p>A026 certification of material conformance</p> <p>A041 quality management system</p> <p>A042 dart notification by supplier</p> <p>A043 retention of quality documents</p> <p>A048 counterfeit parts avoidance, detection, mitigation and disposition program</p> <p>A049 supplier awareness</p> <p>Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.datar aerospace.com for further explanation.</p>

Plex 6/11/18 11:53 AM dart.lavoie.chantal

**DELIVERY - CLIENT****Copy** CO00094527**ACIER OUELLETTE INC.**

935, Boul. du Hâvre
 Salaberry de Valleyfield (Québec) J6S 5L1
 Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction F-M**Delivery Route** 5**Customer N°**

CLI0001056

Date

2018/06/11

Delivery date**2018/06/20****Your order N°**

40159

Processed by

Eric Kaehlert

Salesman**Carrier**

OUELLETTE VALLEYFIELD

Credit Terme

Net 30 Days

Page

1

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
1 TUBE HSS 1 1/2 X 1 X 0.125 * T-1121125 5925 1 X 24'	42.72	24.00	PI_\$CLB				24'				
LINE#1 Heat : 745320 A1											
2 ROUND 4140 HEAT TREAT 2 (R) R4140-2H 4937 1 X 12'	128.16	12.00	PI_\$CLB				12'				
LINE#3 Heat : 75069217 A1											

NIR : R-109516-6

Next Page...

**DELIVERY - CLIENT****Copy**

CO00094527

ACIER OUELLETTE INC.

935, Boul. du Hâvre
 Salaberry de Valleyfield (Québec) J6S 5L1
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Instruction F-M**Delivery Route** 5**Customer N°**

CLI0001056

Date

2018/06/11

Delivery date**2018/06/20****Your order N°**

40159

Processed by

Eric Kaehlert

Salesman**Carrier**

OUELLETTE VALLEYFIELD

Credit Terme

Net 30 Days

Page

2

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
3 PLATE 44W 2 1/2 RANDOM ✓ P44-212-V 4088	118.32	1.16	PI2_\$CLB								
COUPE AU FEU FEU 3		118.00	LBS_\$CLB								
1 PC 3-1/2" X 36"											
LINE#4											
** TRANSIT ST-JEROME 18-06 ** Heat : 7B6102 ✓											
4 ROUND ALU 7 6061-T6 * RAL-7 8708	277.08	6.00	PI_\$CLB								
AC17227-TH-2018-06-14											

NIR : R-109516-6

Next Page...

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935, Boul. du Hâvre
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 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction F-M**Delivery Route** 5**Customer N°**

CLI0001056

Date

2018/06/11

Delivery date

2018/06/20

Your order N°

40159

Processed by

Eric Kaehlert

Salesman**Carrier**

OUELLETTE VALLEYFIELD

Credit Terme

Net 30 Days

Page

3

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
SAW CUT SCIE 1 10 X 7.125" LG		10.00	UN				104				
LINE#5 Heat: Z00025409 A1											
5 SHEET SS 20G SS304-2B (4 X 8) ✓ FESS-20G483042B 3430	200.96	128.00	PI2_\$CLB				44				
PALLET EMB 11 4 X 4' X 8'		1.00	UN								
LINE#6 Heat: 697E A1											

NIR : R-109516-6

Next Page...

**DELIVERY - CLIENT****Copy** CO00094527**ACIER OUELLETTE INC.**

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 Salaberry de Valleyfield (Québec) J6S 5L1
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Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction F-M

Delivery Route

5

Customer N°

CLI0001056

Date

2018/06/11

Delivery date

2018/06/20

Your order N°

40159

Processed by

Eric Kaehlert

Salesman**Carrier**

OUELLETTE VALLEYFIELD

Credit Terme

Net 30 Days

Page

4

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
6 ALU SHEET .064 (14G) 5052-H32 RANDOM FEAL-0645052-V 3176 2 X 4' X 8' (PVC 1 SIDE) LINE#7 AC17228-YR-2018-06-14 Heat : 518016021-6	57.66	64.00	PI2_\$CLB		24						
7 ROUND SS 3/8 304 (R) RSS-38 5768 1 X 12' R/L LINE#8 Heat 1711164	4.51	12.00	PI_\$CLB		14	121					

NIR : R-109516-6

Next Page...

**DELIVERY - CLIENT****Copy**

CO00094527

ACIER OUELLETTE INC.

935, Boul. du Hâvre
 Salaberry de Valleyfield (Québec) J6S 5L1
 Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction F-M**Delivery Route** 5**Customer N°**

CLI0001056

Date

2018/06/11

Delivery date

2018/06/20

Your order N°

40159

Processed by

Eric Kaehlert

Salesman**Carrier**

OUELLETTE VALLEYFIELD

Credit Terme

Net 30 Days

Page

5

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
8 ROUND SS 1/2 303 (R) ✓ RSS-12303 5727 6 X 12' R/L LINE#9 Heat : 520R A	48.02	72.00	PI_\$CLB		6X	121 ^u					
9 ROUND SS 3/4 303 (R) ✓ RSS-34303 5761 6 X 12' R/L LINE#10 Heat 5J049 A	108.14	72.00	PI_\$CLB		6X	12 ^u					

Total Weight (Lbs) : 985.57**NIR :** R-109516-6**Conditions :**

All sold and delivered materials remain the property of "Acer Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acer Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acer Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :  Verified By :

Delivered By : Time



Total (\$CAD)

Date

Customer's Signature

Copy CO00094529

DELIVERY - CLIENT

2018/06/11

40159

2018/06/22

Your order №

OUELETTE VALLEYFIELD

DART AEROSPACE LTD

At : CHANTAL LAVOIE Tel.: 613-632-5200

Carrier

2 PCS 8" X 144"

LINE#2

AC17226-EU-2018-06-24

Heat : 300536

PLATE 4140 HEAT TREAT 3 NS

8508

Internal Use Only

PCS NB

Weight

IN

OUT

Internal Use Only

Product Description

Prepared By : **AM** Verified By : **JQ** Delivered By : **AM** Date : **Y M D** Customer's Signature

Total (\$CAD)

Customer's Signature

Y M D

Time

Delivered By :

Prepared By :

Date

Customer's Signature

Y M D

Time

Delivered By :

Prepared By :

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Chemical certification Certification chimique

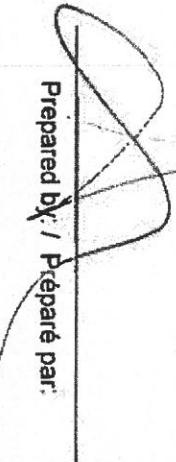
Order Num / No. Commande AC-17226	Vendor / Fournisseur 46	Country of origin / Pays d'origine SLOVENIA	Date 08/13/17	Heat / coulée 300536	Material ID # / No. matière
Grade / Nuance 4140 PLT	Conditions HEAT TREATED				
Shape / Forme FLAT	Size / Dimension 3.000	Specifications ASTM A829/A829M			
Chemical composition / Analyse chimique					
Carbon (C)	Silicon (Si)	Manganese (Mn)	Phosphorus (P)		
Mini / maxi 0.3700 / 0.4400	0.1500 / 0.3500	0.6500 / 1.1000	0.0100 / 0.0190		
Actuel % 0.410	0.226	0.743	0.007		
Sulphur (S)	Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)		
Mini / maxi 0.0200 / 0.0400	0.7500 / 1.2000	0.1000 / 0.2000	0.1500 / 0.2500		
Actuel % 0.001	0.950	0.530	0.180		
Cooper (Cu)	Vanadium (V)	Aluminum (Al)	Tungsten (W)		
Mini / maxi 0.1900 / 0.2900	0.0400 / 0.0500	0.0000 / 0.0000	0.0000 / 0.0000		
Actuel % 0.183	0.032	0.032	0.000		
Cobalt (Co)	Titanium (Ti)				
Mini / maxi 0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000		
Actuel % 0.000	0.000	0.000	0.000		
Mechanical properties / Propriétés Mécaniques					
Yield strength / Élasticité Tensile / Rés. à la traction	Elongation / Allon. (%)	Red. of area / Surface (%)	RC	Surface Hd / Dureté	
0.000	0.000	0.00	270-278	BHN	

Note:

We certify that the above data has been verified and are conform to an original mill or supplier certificate supplied to us with the material

Nous certifions que les données ci haut ont été vérifier et sont conformes d'après un certificat originale qui nous a été fourni par notre fournisseur.

Prepared by / Préparé par:



MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4140-5-3,000x8,000
 DATE: 10/06/21

PO / BATCH NO.: PO04059/508247

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 24 ft
 QUANTITY INSPECTED: 24 ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3"
 THICKNESS RECEIVED: 3"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	
CORROSION	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	ASTM A834
CORRECT THICKNESS	<input checked="" type="checkbox"/>	
PHOTO REQUIRED	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
 RECORD RESULTS BELOW

TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AK</u> <small>DAS</small>	SIGNED OFF BY: _____
DATE: <u>10/06/21</u> <small>9-89</small>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

8 7 6 5 4 3 2 1

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW ISSUE	18-544	18.2.13	VM	ML

D

D

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 / 4142 STEEL SHEET OR PLATE
 MINIMUM ROCKWELL C = 28 Rc
 MAXIMUM ROCKWELL C = 32 Rc

SPECIFICATION: ASTM A829 AMS 6395

PART NUMBER: MT-4140-S-[T.TTT] x [W.WWW]
 WHERE "T.TTT" = THICKNESS IN INCHES
 WHERE "W.WWW" = WIDTH IN INCHES (OPTIONAL FOR SPECIFYING CUT PLATE)

EX. 0.063" THICK SHEET = MT-4140-S-0.063
 EX. 3.5" WIDE BY 0.500" THICK PLATE = MT-4140-S-0.500X3.500

A

A

DART
AEROSPACE Hawkmill, Ontario, Canada

TITLE		REV
PART NO.		
MT-4140-S		A
TOOL NO. -		
INITIALS AND DATE		
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES INTERPRET PER ASME Y14.5M-2009 DIMENSIONS APPLY AFTER FINISHING		
DESIGNED BY:	VM 2/13/2018	TOLERANCES: XX ±.005
DRAWN BY:	VM 02/13/2018	XX ±.01
CHECKED BY:	VM 02/13/2018	ANGLES ±.5° X ±.1
MFG REVIEW BY:	DD 02/13/2018	SURFACE ROUGHNESS
APPROVED BY:	ML 02/14/2018	SCALE: NTS SHEET 1 OF 1
COPYRIGHT © 2018 BY DART AEROSPACE LTD		
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8 7 6 5 4 3 2 1

TRA 2205 #5925

RAPPORT DE TEST MATERIEL

49964

Vendu

à : ACIER OUELLETTE INC.

Daniel Filion

22 John-F. Kennedy

St-Jerome, QC

J7Y 4B6

Canada

Expédier
à : ACIER OUELLETTE INC.

Daniel Filion

22 John-F. Kennedy

St-Jerome, QC

J7Y 4B6

Canada

N° bon de livraison BL17-01996

Date de document 5/23/2017

Votre n° de commande AC5674
Notre n° de vente SO17-00951

Description	1.250 x 1.250 x 288.000 x 0.125 HR A500 B/C									
Heat Number	745316									
C	Mn	P	S	Si	Al	Cu	Cr	Mo	Ni	Cr
0.170	0.730	0.004	0.007	0.020	0.340	0.070	0.001	0.005	0.030	0.030
Yield (Psi)	Tensile (Psi) ELN 2IN (35) Certification									
55,100	65,200.00									
25.4	25.4 ASTM A500 GR B & C									

Description	1.000 x 1.000 x 288.000 x 0.125 HR A500 B/C									
Heat Number	745319									
C	Mn	P	S	Si	Al	Cu	Cr	Mo	Ni	Cr
0.170	0.720	0.004	0.008	0.020	0.042	0.050	0.001	0.003	0.020	0.040
Yield (Psi)	Tensile (Psi) ELN 2IN (%) Certification									
57,100	65,300.00									
25.6	25.6 ASTM A500 GR B & C									

Description	1.500 x 1.000 x 288.000 x 0.125 HR A500 B/C									
Heat Number	745320									
C	Mn	P	S	Si	Al	Cu	Cr	Mo	Ni	Cr
0.170	0.720	0.006	0.007	0.020	0.053	0.060	0.001	0.005	0.020	0.050
Yield (Psi)	Tensile (Psi) ELN 2IN (%) Certification									
55,100	65,200.00									
25.9	25.9 ASTM A500 GR B & C									

Les résultats reportés sur ce document représentent les attributs actuels du matériau fourni et indiquent la conformité complète avec toutes les spécifications applicables et les conditions contractuelles.

SPECIFICATION CONTROL DRAWING



TOLERANCES PER MANUFACTURER SPECIFICATIONS

EG. 2" x 1" RECTANGULAR TUBING WITH .188" WALL THICKNESS = MT-A500-TR-2.000x1.000W0.188

WHERE T.TT IS WALL THICKNESS IN INCHES

WHERE W.WWW IS WIDTH IN INCHES

WHERE H.HHH IS HEIGHT IN INCHES

MT-A500-TR-[H.HHH][W.WWW][W.TTT]

PURCHASE MATERIAL: ASTM A500 DR ASTM A513

PART NUMBER:
SPECIFICATION:

MT-A500-TR

REV	DESCRIPTION	DATE	BY	APPROVED	VM	WM
A	NEW ISSUE	170906				

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-A500-TR-1,500x1,000x0.125 PO / BATCH NO.: P0040159/5082716
 DATE: 18/06/21

MATERIAL CERT REC'D: Yes THICKNESS ORDERED: 0.125"
 QUANTITY RECEIVED: 24 ft SHEET SIZE ORDERED: —
 QUANTITY INSPECTED: 24 ft SHEET SIZE RECEIVED: —
 QUANTITY REJECTED: 0

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/>	
CORRECT FINISH	Y <input checked="" type="radio"/>	
CORROSION	Y <input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="radio"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="radio"/>	ASTM 4300
CORRECT THICKNESS	Y <input checked="" type="radio"/>	
PHOTO REQUIRED	Y <input checked="" type="radio"/>	
CORRECT REF# TO LINK CERT	Y <input checked="" type="radio"/>	HT: 743310
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="radio"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="radio"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

TYPE OF MATERIAL	HRC	HRB	DUR A		DUR D	WEBSTER
SIZE OF TEST SAMPLE						
HARDNESS / DUROMETER READING						

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AK</u>	SIGNED OFF BY: _____
DATE: <u>18/06/21</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

CERTIFICATE OF TEST

CERTIFICAT D'ESAI

4937

15954 (3p)
Page 01 of 03

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

AC00015954

Invoice Number
S706880

Certification Date
7-MAY-2018

PART NUMBER/NUMÉRO DE PIÈCE

506433

SOLD TO: ACIER OUELLETTE INC. **SHIP TO:** ACIER OUELLETTE INC.
VENDU À: DIVISION SALABERRY DE VALLEYFIELD
935, BOUL. DU HAVRE
SALABERRY-DE- VALLEYFIELD QC J6S 5L1 SALABERRY-DE- VALLEYFIELD QC J6S

Description: 4140/4142 HR HT BAR STRESS FREE 269/321 BHN

2 RD X 20' R/L
HEAT: 75069217
ITEM: 506433
Line Total: 470 LB

Specifications:

ASTM A193 GR B7 16
ASTM A322 13
CAT 1E0024
ASTM E112
ASTM A304 16
ASTM A370 17

ASTM A434 GR BC 17
JDM LAO-QL-2 4/17
(ASTM A29/A29M 16
ASTM E70 1ST P
ASTM E45 METHOD A 13
ASTM E8 16

CHEMICAL ANALYSIS

C	MN	P	S	SI	NI	CR	MO
0.41	0.90	0.021	0.035	0.25	0.12	0.91	0.18

CU	SN	AL	V	B	CA	NB	H
0.23	0.01	0.025	0.004	0.0005	0.001	0.003	0.0001

RCPT: R409925

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

YILD STR	ULT TEN	%ELONG	%RED	HARDNESS
YLD STR 125.0	ULT TEN 141.0	%ELONG IN 02 IN 20.0	%RED IN AREA 55.0	HARDNESS BHN 308

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrits du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession./Par les présentes, nous certifions que le matériel couvert par ce rapport n'a pas été en contact avec le mercure.

MANAGER QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITE

CERTIFICATE OF TEST

CERTIFICAT D'ESSAIS

Page 02 of 03
Certification Date
7-MAY-2018

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

AC00015954

Invoice Number
S706880

PART NUMBER/NUMÉRO DE PIÈCE

506433

SOLD TO: ACTIER OUËLLETTE INC.
DIVISION SALABERRY DE VALLEYFIELD
935, BOUT. DU HAVRE EXPÉDIE: 935, BOUT. DU HAVRE
SALABERRY-DE- VALLEYFIELD QC J6S 5L1 SALABERRY-DE- VALLEYFIELD QC J6S

Description: 4140/4142 HR HT BAR STRESS FREE 269/321 BHN
2 RD X 20', R/L

THAI: 75069217

ITEM: 506433

Line Total: 470 LB

END-QUENCH HARDENABILITY (JOMINY - RC)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
57	57	57	57	57	57	56	56	55	54	52	51	50	49	48	47
16	18	20	22	24	26	28	30	32	33	34	35	36	37	38	39
46	45	45	43	41	40	40	39	38	37	36	35	34	33	32	31
avg	2.5	0.8	1.0	0.0	0.5	0.0	1.4	0.4	0.0	1.4	0.0	1.4	0.4	0.0	0.4

IDEAL DIAMETER : 5.3 IN GRAIN SIZE : 5 - 8

CLEANLINESS

	A	B	C	D	
THIN	THICK	THIN	THICK	THIN	
MAX	MAX	MAX	MAX	MAX	
avg	2.5	0.8	1.0	0.0	0.4

STRAND CAST VACUUM DEGASSED
MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

THERMAL TREATMENT: OK
AUST TEMP 1635 F TIME (MIN.) 2.20
QUENCH TEMP 100 F TIME (MIN.) 0.70 MEDIA WATER
TEMEPR TEMP 1350 F TIME (MIN.) 2.20
MACRO: OK
MICRO1: OK

COMMENTS
red. ratio 21.76 to 1.0

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut renvoient des résultats transcrits du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. Nous certifions que le matériel couvert par ce rapport rencontrera les spécifications décrites ci-haut.

The wilful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come ~~in~~ ^{with} ~~the~~ ⁱⁿ our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontrera les spécifications décrites ci-haut.

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

Certification Date
7-MAY-2018

CUSTOMER ORDER NUMBER
NUMÉRO DE DEMANDE DU CLIENT
S706880

Invoice Number
S706880

PART NUMBER/NUMÉRO DE PIÈCE

ACIER OUELETTE INC.	ACIER OUELETTE INC.
DIVISION SALABERRY DE VALLEYFIELD	DIVISION SALABERRY DE VALLEYFIELD
935, BOUL. DU HAVRE	935, BOUL. DU HAVRE
SALABERRY-DE- VALLEYFIELD	SHIP TO:
2 RD X 20' R/L	511 SALABERRY-DE- VALLEYFIELD QC J6E
HEAT: 75069217	Description: 4140/4142 HR HT BAR STRESS FREE 269/321 BHN
	Line Total: 470 LB
	ITEM: 506433
100% melted & mfg in usa	free from radioactive material

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcris du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

JOANNE DESPRES

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.


Joanne Despres

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4140-R 2.000
 DATE: 18/06/21

PO / BATCH NO.: P0040159/5082798

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 1244
 QUANTITY INSPECTED: 1244
 QUANTITY REJECTED: 0
 THICKNESS ORDERED: 2 1/4
 THICKNESS RECEIVED: 2 1/4
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	Y (N)	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	Y (N)	
CORRECT MATERIAL PER M-DRAWING	Y (N)	ASTM A24
CORRECT THICKNESS	Y (N)	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	Y (N)	17: 75069217
CORRECT MATERIAL IDENTIFICATION	Y (N)	
CORRECT M# ON THE MATERIAL	Y (N)	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.
 RECORD RESULTS BELOW

TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DURA	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AK</u> DAS	SIGNED OFF BY: _____
DATE: <u>18/06/21</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

8	7	6	5	4	3	2	1
D							D
C							C
8	7	6	5	4	3	2	1

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW ISSUE	17-790	17.12.13	VM	ML

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 ROUND BAR
 MINIMUM ROCKWELL C = 20 Rc
 MAXIMUM ROCKWELL C = 38 Rc

SPECIFICATION: ASTM A29, AMS 6349, AMS 6382, AMS 6529

PART NUMBER: MT-4140-R-[D.DDD]
 WHERE "D.DDD" = DIAMETER IN INCHES
 EX. 4" ROUND BAR = MT-4140-R-4.000

DART
AEROSPACE

Hawkesbury, Ontario, Canada

TITLE	
AISI 4140 ROUND BAR	
PART NO.	REV.
MT-4140-R	A
TOOL NO.	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES INTERPRET PER ASME Y14.5M-2009 DIMENSIONS APPLY AFTER FINISHING	
INITIALS AND DATE	
DESIGNED BY:	VM 17/12/13
DRAWN BY:	VM 12/13/2017
CHECKED BY:	ML 12/19/2017
MFG REVIEW BY:	DP 12/20/2017
APPROVED BY:	ML 12/20/2017
SCALE: HTS SHEET 1 OF 1	
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THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS PROVIDED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE MADE FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

DATE : 16/08/2017
CERTIFICATE NO : 71275881
PAGE NO : 1

TEST CERTIFICATE

OUTSTANDING CAPITAL : 3,500,000,000 TL
CERTIFICATE NO : 71275881
DATE : 16/08/2017
TEST CERTIFICATE
EN 10204 : 2004 TYPE 3.1
PAGE NO : 1

STANDARD & GRADE : CSA G40.21-13 / ASTM A572-15 300W / G50 TYPE 2 (ERDMLR 3246) PRODUCT TYPE & DEFINITION : LMK : HOT ROLLED HEAVY PLATE WITH MILL EDGE

596 NO MERCURY COMPOUNDS NO WELD REPAIR
ULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION, MECHANICAL COMPOSITION, CAST ANALYSIS

N/M2 N/M2 200 C N/M2

0.169 1.255 0.015 0.003 0.212 0.032 0.053 0.038 0.067 55
237034136 7,630 7B5345 /B334500000201 11 388,7 55,7 0 25
7B5346 7B534613057L010 11 297,4 65,0 0 24
237034137 7,630 7B534613057L031 11 297,4 65,0 0 24

37023537 7_6301 6D5436 6D543610000310 11 367.7 557.0 25
0.177 1.422 0.009 0.005 0.199 0.048 0.073 0.051 0.077 56

370323782 7,670 70230135011010 785356 78535610000210 ITT 387.4 560.0 24 0.189 1.255 0.015 0.003 0.212 0.032 0.053 0.038 0.067 55

37032784 7,640 782650 702301350410101 1 11 388,3 564,9 24 6,122 1,438 0,014 0,003 0,213 0,631 0,658 0,042 0,073 49

(THE MUND-FACTORY) HERBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIS OF OXYGEN TESTED IN ACCORDANCE WITH THE RULES OF A 460-21-13 / ASTM A572-15 300W / GRSO TYPE 2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS.

TURK VE CELLIK EKI
EMIR VE GELLIK
ALİ İLHAN

RSIS Number: 0352-0006-4260-0020; Trade Registry Number (İşbankı Department): 90659; Trade Registry Number (Ergeji Department): 1574/122
Head Office: Barbaress Mh. Ardiç Sok. No: 6 34746 Alşehir İSTANBUL - TURKEY
ad Office: İstanb ul Barbaress Mh. Ardiç Sok. No: 6 34746 Alşehir İSTANBUL - TURKEY
www.ardemir.com.tr

ERDEMİR

TEST CERTIFICATE

2000 NO MELANCHOLY, COMB-GUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

STANDARD TYPE & DEFINITION: LMK: HOT ROLLED HEAVY PLATE WITH MILL EDGE
 DIMENSIONS, MM: CSC: 440-21-13 / ASTM A57-31 / 350W X 96 X 240 INCH
 CSC: 330W X 96 X 96 X 240 INCH

PRODUCT INFORMATION | CHEMICAL COMPOSITION, CAST ANALYSIS

ERDEMİR

Trade Registration Number: 0352-0006-4260-0020 | Trade Registry Number: 34746 Alzabethi | Istanbul - Turkey

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:	HOT ROLLED STEEL BAR					
SPECIFICATION:						
ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018						
WHERE W.WWW IS BAR WIDTH IN INCHES						
WHERE H.HHH IS BAR THICKNESS IN INCHES						
MT-HRS-B-(W.WWW)x(H.HHH)						
PART NUMBER:						
MT-HRS-B-2.000x0.250						
EXAMPLE:						
TOLERANCES PER MANUFACTURER SPECIFICATIONS						
WHERE H.HHH IS BAR THICKNESS IN INCHES						
WHERE W.WWW IS BAR WIDTH IN INCHES						
MT-HRS-B-(W.WWW)x(H.HHH)						
SPECS PAGE						
DRAFT						
HOT ROLLED STEEL BAR						
MT-HRS-B						
DESIGN BY: SAC 09/09/2017 DATE: 09/09/2017 APPROVED: WM 10/05/2017						
CHECKED: VM 09/09/2017 DATE: 09/09/2017 APPROVED: WM 10/05/2017						
DESIGNER: SPENCER G. SPENCER DATE: 09/09/2017 APPROVED: SPENCER G. SPENCER DATE: 09/09/2017						
SCALE: N/A WEIGHT: N/A SHEET 1 OF 1						
DRAFTED BY SPENCER G. SPENCER DATE: 09/09/2017 APPROVED BY SPENCER G. SPENCER DATE: 09/09/2017						

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-HR5-β-2.500 x 3.500 PO / BATCH NO.: P0040159/5082749
 DATE: 19/06/24

MATERIAL CERT REC'D: 405 THICKNESS ORDERED: _____
 QUANTITY RECEIVED: 344 THICKNESS RECEIVED: _____
 QUANTITY INSPECTED: 344 SHEET SIZE ORDERED: _____
 QUANTITY REJECTED: 0 SHEET SIZE RECEIVED: _____

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/>	U/A Gr. Dert tooling use only <input checked="" type="checkbox"/>
CORRECT THICKNESS	Y <input checked="" type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="checkbox"/>	
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/>	HT: 766102
CORRECT M# ON THE MATERIAL	N <input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DURA	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> <small>DAE</small>	SIGNED OFF BY: _____
DATE: <u>18/06/24</u> <small>8:50</small>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

94527

Dart

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER

ALUMINUM

FABRICATED PRODUCTS

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
5205 KAISER DRIVE
KALAMAZOO, MI 49048

CUSTOMER PO NUMBER:	CUSTOMER PART NUMBER:	PRODUCT DESCRIPTION:
5400396921-7	ALR00065	KAISERSELECT PRECISON ROD 7.000 +/- .022
KAISER ORDER NUMBER: LINE ITEM:	SHIP DATE:	KAISER LOT NUMBER:
6051775	007	04/20/2018
WEIGHT SHIPPED:	QUANTITY:	ALLOY:
2172.000 LB	4.000 PCS	Z00025409
SHIP TO:	B/L NUMBER:	TEMPER:
	622542	T6511B
	SOLD TO:	WIDTH:
		12.000 FT

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
Z00025409	0001	0001	56.9	53.6	12.1	RE	95	N/A
Z00025409	0002	0001	55.0	50.9	12.6	RE	94	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Eu	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
108482	.75	.29	.29	.09	.93	.10	.06	.02	.00	.00	.00	.01	.03

Applicable Requirements:

PER ASTM-B221-14, STENCILED ASME-SB221 2009 SECT II PER ~~AMS-QQ-A-200~~/8A UNS# A96061
MEETS ALL SPECIFICATION REQUIREMENTS FOR 6061-T6511/T6 ELEVATED MINIMUM MECHANICAL
PROPERTIES AS FOLLOWS: UTS = 42.0 KSI MIN YIELD = 38.0 KSI MIN ELONGATION = 10.0% MIN

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY
OF ITS COMPOUNDS ARE UTILITIZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Aimee L. Macnowski, Quality & Technology Manager

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: Model 176R2000 PO / BATCH NO.: P0040159/5022Ba
 DATE: 18/06/21

MATERIAL CERT REC'D: Kes THICKNESS ORDERED: 7.125"
 QUANTITY RECEIVED: 5.939 ft THICKNESS RECEIVED: 7.125"
 QUANTITY INSPECTED: 5.438 ft SHEET SIZE ORDERED: —
 QUANTITY REJECTED: 0 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/>	
CORRECT FINISH	Y <input checked="" type="radio"/>	
CORROSION	Y <input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="radio"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="radio"/>	AM5 - 00 - A - 200%
CORRECT THICKNESS	Y <input checked="" type="radio"/>	
PHOTO REQUIRED	Y <input checked="" type="radio"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="radio"/>	
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="radio"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="radio"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>A. S. S.</u>	SIGNED OFF BY: _____
DATE: <u>19/06/21</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR

SPECIFICATION: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221

B

PART NUMBER: M6061T6R[D.DDD]
[DIA.]

WHERE "D DDD" = DIAMETER IN INCHES

EG. 5/8" ROUND BAR = M6061T6R0.625

RELEASED
2009-09-09
MP

B	REFORMAT DWG. ADD B211& B221 SPEC (ZN DB-1), REF PAR 08-020A	CP	09.07.13
A	NEW ISSUE	DS	01.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>MP</i>	DART AEROSPACE LTD	
DRAWN	<i>MP</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>MP</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>MP</i>	M6061T6R	SHEET 1 OF 1
APPROVED	<i>MP</i>	TITLE	SCALE
DE APPR.	<i>MP</i>	6061-T6 ROUND BAR	NTS
DATE	09.07.13	COPYRIGHT © 2001 BY DART AEROSPACE LTD THE INFORMATION CONTAINED HEREIN IS UNPUBLISHED PROPRIETARY INFORMATION OF DART AEROSPACE LTD. IT IS PROVIDED ON A CONFIDENTIAL BASIS AND IS NOT TO BE USED, COPIED OR DISCLOSED EXCEPT AS AUTHORIZED BY DART AEROSPACE LTD.	



3430
North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

FESS-20G 483042B

METALLURGICAL TEST REPORT

50899 15908
6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 380647 1 Mail To:

Ship To:

Date: 2/12/2018 Page: 1

Customer: 007036 016

Steel: 304

Finish: 2B

Corrosion: ASTM A262/15 A; 180Bend-OK

Your Order: 4500849627

NAS Order: DS 0013475 01

PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED; UNS 30400
ASTM A248/17, A480/16b, A666/15; ASME SA240/17, SA480/17, SA666/17
CHEM ONLY ON FOLLOWING ASTM: A276/17, A479/17, A484/16, A312/16
CHEM ONLY ON FOLLOWING ASME: SA312/13, SA479/13
AMS 5513J XMRK; MIL-S-5059D AMEND3 (X CROWN MEAS)
NACE MR0175/ISO 15156-3:2009 A, MR0103/07; QQS766D-A X MAG PERM
MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.
EN 10204:2004 3.1; RoHS 1 & 2 Compliant
Material is Free of Radioactive Contamination
Steel Making Process: EAF, AOD, & Cont. Casting
Product Mfg. by a Quality Mgt. Sys. in Conf. w/ISO 9001
*Melted & Manufactured in the USA; Mat'l is DFARS Compliant

Product Id	Coil #	Skid #	Thickness	Width	Weight	Length	Mark	Pieces	Commodity Code
02697E A	02697E A		.0360	48.0000	10,360	COIL	3	1	160009446

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323
Chemical Analysis per ASTM A751/14a

HEAT 697E	CM	C %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %	Chemical Analysis per ASTM A751/14a	
											SI %	
											.2505	

MECHANICAL PROPERTIES

Product Id#	Coil #	UTS KSI	20C KSI	.2% YS KSI	20C ELONG % -2"	% Hard RB	Tail Hard
02697E A	02697E A	F T 103.25	52.54	54.54	87.00	86.50	

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

KRIS LARK

2/12/2018

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET
ANNEALED

SPECIFICATION: MIL-S-5059
OR AMS 5513 (304)
OR AMS 5524 (316)
OR ~~ASTM A240~~
OR ASME SA240

FINISH:

FINISH	DART M-NUMBER IDENTIFIER
UNPOLISHED No. 1	1P
UNPOLISHED No. 2D	2D
UNPOLISHED No. 2B	NONE
POLISHED No. 3	3P
POLISHED No. 4	4P
BUFFED No. 6	6P
BUFFED No. 7	7P
BUFFED No. 8	8P

PART NUMBER: M304S TT GA #P
GA

WHERE "TT" = GAUGE THICKNESS
WHERE "#P" = FINISH IDENTIFIER

EG. 16 GAUGE SS SHEET 2B FINISH = M304S16GA
EG. 16 GAUGE SS SHEET No. 4 POLISHED = M304S16GA4P

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
26	0.01875	0.0178 - 0.019
25	0.021875	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.04375	0.041 - 0.046
18	0.050	0.047 - 0.052
17	0.05625	0.053 - 0.058
16	0.0625	0.059 - 0.065
15	0.0703125	0.066 - 0.072
14	0.078125	0.073 - 0.083
13	0.09375	0.084 - 0.098
12	0.109375	0.099 - 0.114
11	0.125	0.115 - 0.130
10	0.140625	0.131 - 0.145
9	0.15625	0.146 - 0.160
8	0.171875	0.161 - 0.176
7	0.1875	0.182 - 0.194
6	0.2031	0.194 - 0.212
5	0.2188	0.201 - 0.228
4	0.2344	0.225 - 0.243
3	0.2500	0.238 - 0.262
2	0.2656	0.254 - 0.278
1	0.2813	0.269 - 0.293
0	0.3125	0.301 - 0.325



RELEASED

2015 FEB 04

ECON 15-522 47

D	ADDED GAUGES D-7.	AJS	15.01.06
C	DEFINED FINISH OPTION (ZN C8) AND EXAMPLE OF MATERIAL P/N WITH FINISH OTHER THAN 2B (ZN B5)	MB	12.09.20
B	REFORMAT DWG. ADD ASTM/ASME SPEC'S (ZN D8-1). ADD GAUGE REF (C8-1), REF PAR 08-020A	GP	09.06.01
A	NEW ISSUE	DS	01.09.24
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. D
MFG. APPR.		M304S	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		304/316 SS SHEET	NTS
DATE	15.01.06	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND RESTRICTED. NO COPIES OR REPRODUCTION ARE PERMITTED EXCEPT ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M3045206A PO / BATCH NO.: P00401595082801
 DATE: 18/06/21

MATERIAL CERT REC'D: Y THICKNESS ORDERED: .040
 QUANTITY RECEIVED: 12854 THICKNESS RECEIVED: .040
 QUANTITY INSPECTED: 12854 SHEET SIZE ORDERED: 48" x 8"
 QUANTITY REJECTED: 0 SHEET SIZE RECEIVED: 48" x 8"

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y N	ASTM A36
CORRECT THICKNESS	Y N	
PHOTO REQUIRED	Y N	
CORRECT REF # TO LINK CERT	Y N	47-6976
CORRECT MATERIAL IDENTIFICATION	Y N	
CORRECT M# ON THE MATERIAL	Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

TYPE OF MATERIAL	HRC	HRB	DURA		DUR D	WEBSTER
SIZE OF TEST SAMPLE						
HARDNESS / DUROMETER READING						

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>A</u> DAS	SIGNED OFF BY: _____
DATE: <u>18/06/21</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

94527

Dart

17228 N



ZHE JIANG GKO ALUMINIUM STOCK CO., LTD.

XIATAO, FENGJIANG, LUQIAO, TAIZHOU, ZHEJIANG, CHINA

TEL.: +86 576 82696583 FAX.: +86 576 82696589

MILL TEST REPORT

BUYER: EMPIRE RESOURCES, INC. 2115 LINWOOD AVENUE FORT LEE, NJ07024	Date: 2018-3-20 Invoice: CI01527-1 Contract No.: U01527 Loading Port: Tianjin, China COUNTRY OF MELT&MANUFACTURE: CHINA
--	---

MATERIAL GRADE: 5052H32 AS PER "ASTM B209-14" -- AMS/ QQ A 250/8 AND AMS 4016M

Destination: TORONTO

B/L NO.: MAEU964234588

ISF NO.:

ETD: 2018-3-17

No.	PO NO.	DESCRIPTION OF GOODS:	ALLOY/T EMPER.	Specification (inch)	Bundle No.	N.W. (lbs)	HEAT NO.	Chemical Composition(%)									Mechanical Properties			
								Al	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	T.S. (ksi)	Yield.S. (ksi)	E(%)
1	U01527	SHEET	5052H32	0.05*48*96	5180160140-3	3272	5180160140	96.89	0.094	0.302	0.007	0.055	2.430	0.199	0.004	0.006	0.014	33.4	24.5	12.0
2	U01527	SHEET	5052H32	0.05*48*96	5180160140-2	3488	5180160140	96.89	0.094	0.302	0.007	0.055	2.430	0.199	0.004	0.006	0.014	33.4	24.5	12.0
3	U01527	SHEET	5052H32	0.05*48*96	5180160140-1	3492	5180160140	96.89	0.094	0.302	0.007	0.055	2.430	0.199	0.004	0.006	0.014	33.4	24.5	12.0
4	U01527	SHEET	5052H32	0.063*48*96	5180160021-4	3770	5180160021	96.92	0.099	0.299	0.004	0.013	2.440	0.200	0.004	0.006	0.012	34.1	24.9	11.0
5	U01527	SHEET	5052H32	0.063*48*96	5180160021-5	3770	5180160021	96.92	0.099	0.299	0.004	0.013	2.440	0.200	0.004	0.006	0.012	34.1	24.9	11.0
6	U01527	SHEET	5052H32	0.063*48*96	5180160021-3	3774	5180160021	96.92	0.099	0.299	0.004	0.013	2.440	0.200	0.004	0.006	0.012	34.1	24.9	11.0
7	U01527	SHEET	5052H32	0.063*48*96	5180160021-7	3774	5180160021	96.92	0.099	0.299	0.004	0.013	2.440	0.200	0.004	0.006	0.012	34.1	24.9	11.0
8	U01527	SHEET	5052H32	0.063*48*96	5180160021-6	3783	5180160021	96.92	0.099	0.299	0.004	0.013	2.440	0.200	0.004	0.006	0.012	34.1	24.9	11.0
9	U01527	SHEET	5052H32	0.063*48*120	5180160153-1	3430	5180160153	96.88	0.106	0.313	0.007	0.061	2.410	0.192	0.005	0.008	0.015	33.4	29.0	13.0
10	U01527	SHEET	5052H32	0.063*48*120	5180160153-3	3435	5180160153	96.88	0.106	0.313	0.007	0.061	2.410	0.192	0.005	0.008	0.015	33.4	29.0	13.0
11	U01527	SHEET	5052H32	0.063*48*120	5180160153-2	3457	5180160153	96.88	0.106	0.313	0.007	0.061	2.410	0.192	0.005	0.008	0.015	33.4	29.0	13.0
12	U01527	SHEET	5052H32	0.08*48*96	5180160148-7	3272	5180160148	96.95	0.089	0.263	0.009	0.054	2.390	0.215	0.004	0.007	0.015	32.6	29.0	14.0
13	U01527	SHEET	5052H32	0.08*48*96	5180160148-6	3280	5180160148	96.95	0.089	0.263	0.009	0.054	2.390	0.215	0.004	0.007	0.015	32.6	29.0	14.0
14	U01527	SHEET	5052H32	0.08*48*96	5180160148-4	3289	5180160148	96.95	0.089	0.263	0.009	0.054	2.390	0.215	0.004	0.007	0.015	32.6	29.0	14.0
15	U01527	SHEET	5052H32	0.08*48*96	5180160148-5	3298	5180160148	96.95	0.089	0.263	0.009	0.054	2.390	0.215	0.004	0.007	0.015	32.6	29.0	14.0

16	U01527	SHEET	5052H32	0.09*48*96	5180160100-C-1	2734	5180160100	96.81	0.103	0.311	0.012	0.085	2.450	0.204	0.005	0.006	0.016	31.9	29.0	11.0
17	U01527	SHEET	5052H32	0.09*48*96	5180160100-C-2	2738	5180160100	96.81	0.103	0.311	0.012	0.085	2.450	0.204	0.005	0.006	0.016	31.9	29.0	11.0
18	U01527	SHEET	5052H32	0.09*48*96	5180160100-C-3	3320	5180160100	96.81	0.103	0.311	0.012	0.085	2.450	0.204	0.005	0.006	0.016	31.9	29.0	11.0
19	U01527	SHEET	5052H32	0.09*48*120	5180160158-4	3404	5180160158	96.89	0.109	0.306	0.008	0.063	2.410	0.196	0.005	0.008	0.010	33.4	29.0	12.0
20	U01527	SHEET	5052H32	0.09*48*120	5180160158-6	3404	5180160158	96.89	0.109	0.306	0.008	0.063	2.410	0.196	0.005	0.008	0.010	33.4	29.0	12.0
21	U01527	SHEET	5052H32	0.09*48*120	5180160158-5	3408	5180160158	96.89	0.109	0.306	0.008	0.063	2.410	0.196	0.005	0.008	0.010	33.4	29.0	12.0

ZHE JIANG GKO ALUMINIUM STOCK CO., LTD.

浙江巨科铝业股份有限公司

ZHEJIANG GKO ALUMINIUM STOCK CO., LTD.



SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL 5052-H32 ALUMINUM SHEET

SPECIFICATION: QQ-A-250/8 OR AMS-QQ-A-250/8
OR AMS 4016
OR ASTM B209

PART NUMBER: M5052H32S | XXX |
THK |

WHERE "XXX" = SHEET THICKNESS (IN INCHES)

EG. 0.063" THICK SHEET = M5052H32.063

PREFERRED SIZE: .XXX BY 4FT BY 8FT

RELEASED
2009-10-30
MP

B	REFORMAT DWG. ADD B209 SPEC (2N D8-1), PAR 08-020A	CP	09.09.26
A	NEW ISSUE	DS	01.06.08
REV.	DESCRIPTION		
DESIGN	SB	DART AEROSPACE LTD	
DRAWN	99	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A	DRAWING NO.	REV. B
MFG. APPR.	TD	M5052H32S	SHEET 1 OF 1
APPROVED	MP	TITLE	SCALE
DE APPR.	MP	5052-H32 SHEET SPEC	NTS
DATE	09.09.26	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED AS THE EXCLUSIVE PROPERTY OF DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M50524325.063 PO / BATCH NO.: 10040159/150828a
 DATE: 18/06/21

MATERIAL CERT REC'D: Yes THICKNESS ORDERED: .063"
 QUANTITY RECEIVED: 6454 SHEET SIZE ORDERED: 4' x 8'
 QUANTITY INSPECTED: 6454 SHEET SIZE RECEIVED: 4' x 8'
 QUANTITY REJECTED: 0

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	N <input checked="" type="checkbox"/>	QQ-A-250/8
CORRECT THICKNESS	Y <input checked="" type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/>	
CORRECT REF# TO LINK CERT	N <input checked="" type="checkbox"/>	47578060021-6
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/>	
CORRECT M# ON THE MATERIAL	N <input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.
 RECORD RESULTS BELOW

TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>A. M. M. A.</u> DAS	SIGNED OFF BY: _____
DATE: <u>18/06/21</u> 9-89	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

#5768



(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ADM. OFFICE: 344, SURESHNAGAR, NARSHARUWAD, MUMBAI - 400 064, INDIA

TELE: 91-22-6270066, FAX: 91-22-62620653/34

WEBSITE : www.chandansteelltd.netEMAIL : cs@chandansteelltd.net

L/C. No.3

L/C. Date:

R824 QC/09A/02/10.12.2012

MILL TEST/INSPECTION CERTIFICATE 3.1

ACCORDING TO EN 10204:2005

Consignee

P. O. No.	: MN5942	
SC. No. & Date	: 17-18/08/17, D: 08.11.2017	
Invoice No. & Date	: EXP/01152/2017-18	D: 03.01.2018

PRODUCT DESCRIPTION
STAINLESS STEEL ROUND BARS

Heat No.	Grade	Size mm/inches	Tolerance	Length	Ordered	Actual	Net Wt. 2965 Lbs.
171164	304L	3/8"	±0.05	12'-14'	12'-14'	12'-14'	

CHEMICAL COMPOSITION (Weight %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N
Min.	-	-	-	-	18.00	-	8.00	-	-	-
Max.	0.030	1.00	2.00	0.045	0.030	20.00	-	12.00	-	-
Results	0.028	0.37	1.57	0.039	0.016	18.55	-	8.04	-	-

MECHANICAL PROPERTIES

Specified Value	Yield Strength N/mm ² /MPa (Rp0.2)	Tensile Strength N/mm ² /MPa (Rm)	Elongation %	Reduction of Area %	Hardness (HB)
Mn.	310	620	30	40	-
Max.	-	-	-	-	-
Results	615	786	36	65	239-242

Remarks:

1. Cold drawn & Centreless Ground.
2. Solution annealed at 1050 °C.
3. PMI test done 100% & found Satisfactory.
4. Material is free from radio-active contamination.
5. Inter-Granular Corrosion Test as per ASTM A262-15 (P/E) satisfactory.
6. The material conforms to ASTM A276/15/A182-15/A479-15 & ASME SA429/43 Specifications.
7. Location of sample:- Centre, Direction - Longitudinal, Test Temp - Room Temp, Shape of Test Piece - Round.
8. Marking details - Company Logo, Size, Grade & Heat No.
9. The material is manufactured / melt in Chandan Steel Mill and is of Indian Origin.
10. No welding/weld repairs was performed on this material.

BUNDLE NO.: 21 & 22



It is hereby certified that the above results are true and correct in every detail and are meeting the requirements of specification & purchase order.

SPECIFICATION CONTROL DRAWING

8 7 6 5 4 3 2 1

D

D

PURCHASE MATERIAL: **AISI 304/316 SS ROUND BAR**
(NOTE: AISI 303 NOT ACCEPTABLE)

B SPECIFICATION: **ASTM A276**
PART NUMBER: **M304R[D.DDD]**
DIA.

WHERE "D.DDD" = DIAMETER IN INCHES
EG. 0.75" ROUND BAR = M304R0.750

C

C

B

B

A

A

RELEASED
01/25/14

B	REFORMAT DWG. ADD SPECS (ZN D6-1), REF PAR 08-020A	CP	09.07.15
A	NEW ISSUE	AJS	08.03.03
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>AJS</i>	DART AEROSPACE LTD	
DRAWN	<i>99</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>4</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>M</i>	M304R	SHEET 1 OF 1
APPROVED	<i>W</i>	TITLE	SCALE
DE APPR.	<i>W</i>	304/316 ROUND BAR	NTS
DATE	09.07.15	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DRAWING IS PROPRIETARY AND CONFIDENTIAL AND IS RESTRICTED FOR THE EXPRESS PURPOSES ONLY. NOT TO BE COPIED, OR OTHERWISE DISCLOSED, OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN APPROVAL FROM DART AEROSPACE LTD.	

8 7 6 5 4 3 2 1

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304R0.375 PO / BATCH NO.: 8040159/5082803
 DATE: 18/06/24

MATERIAL CERT REC'D: Yes THICKNESS ORDERED: .375"
 QUANTITY RECEIVED: 124 THICKNESS RECEIVED: .375"
 QUANTITY INSPECTED: 124 SHEET SIZE ORDERED: —
 QUANTITY REJECTED: 0 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/>	ASTM A276
CORRECT THICKNESS	Y <input checked="" type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/>	
CORRECT REF# TO LINK CERT	Y <input checked="" type="checkbox"/>	HT 171164
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

Testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DAS	SIGNED OFF BY: _____
DATE: <u>18/06/24</u> 8G	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

5727

METALLURGICAL TEST REPORT

RSS-12308-U

PO. 12848
6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

49923

Certificate: 371391 3 Mail To:

Ship To:

Date: 1/15/2018

Page: 1

Customer: 007080 003

Steel: 303

Finish: CD

Corrosion:

Your Order: MR6001

NAS Order: IM 0257533 05

Heat Treat Code: 43,147

PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw
UNS S30300, ASTM A582/12 ER 10204 3.1, ASTM A484/16
AMS 5640V TYPE 1, QQS-764B CONDITION A
SOLUTION ANNEAL TEMP 1900°F MIN, ASTM F899/12b

REMARKS:

COMPLIES W/REQUIREMENTS OF DFAR 252.225-7009 EU DIRECTIVE
2011/65/EU-RoHS. EAF+ACD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product ID	Stock #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BI9788 9		.5000		1,073	144.00	7	1	

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323
Chemical Analysis per ASTM A751/14a

NAS Heat	CM	C %	CO %	CR %	CU %	NI %	NO %	N %	NI %	P %
520R A	US	.026	.13	17.09	.35	1.83	.275	.050	8.50	.031
		S %	Si %							
		.3010	.30							

MECHANICAL PROPERTIES

Product ID	1 d o i c x	2 d o i c x	HD No.	.2YS KSI	UTS KSI	RA %	Elong % 2"
BI9788 9	R L		191.0	69.04	100.58	41.70	29.90

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

KRIS LARK

1/15/2018

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 303 SS ROUND BAR
(NOTE: AISI 304/316 NOT ACCEPTABLE)

B SPECIFICATION: **ASTM A582**

PART NUMBER: **M303R|D.DDD**
| DIA.

WHERE "D.DDD" = DIAMETER IN INCHES
EG. 0.75" ROUND BAR = M303R0.750

RELEASED
2010-02-02
M

B	REFORMAT DWG. ADD SPECS (ZN D8-1). REF PAR 08-020A	CP	10.01.05
A	NEW ISSUE	DS	01.12.20
REV.	DESCRIPTION	BY	DATE
DESIGN	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN	<i>SP</i>		
CHECKED	<i>SP</i>		
MFG. APPR.	DRAWING NO. M303R REV. B SHEET 1 OF 1		
APPROVED	<i>SP</i>		
DE APPR.	<i>SP</i>		
DATE	SCALE NTS 10.01.05		

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M303R0500 PO / BATCH NO.: P0040159/5092804
 DATE: 18/06/21

MATERIAL CERT REC'D: Yes THICKNESS ORDERED: .500"
 QUANTITY RECEIVED: 72.4 THICKNESS RECEIVED: .500"
 QUANTITY INSPECTED: 72.4 SHEET SIZE ORDERED: —
 QUANTITY REJECTED: 0 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/>	ASTM A382
CORRECT THICKNESS	Y <input checked="" type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="checkbox"/>	UT.500
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> _{DAS}	SIGNED OFF BY: _____
DATE: <u>18/06/21</u> _{8:00}	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

5761

RSS-34303

51361

17303



INSPECTION CERTIFICATE

CUSTOMER : TA CHIN INTERNATIONAL, INC.

COMMODITY: Stainless Steel Cold Drawn Round Bar (A3)

CERTIFICATE NO: A1711280242

ORDER NO.: 106090007/262468

SPECIFICATION: 303

DOC No.:

WILSON LINNA CORP.

WILSON PLANT
NO. 3-10, SHILOH LANE, CHI SHIH LI,
TAICHUNG CITY 7704, TAIWAN, R.O.C.
TEL: 86-4-621-9111 FAX: 86-4-621-9114

LC NO: 0000

SUPPLY CONDITION: CD

DATE OF ISSUE: 2017/11/26

Heat No		Thickness (inch)	Pcs	Wt. (LBS)	Chemical Composition(wt%)										Mechanical Property					BUONLE NO	
Spec	Min Max				C x100	Si x100	Mn x100	P x1000	S x1000	Ni x100	Cr x100	Mo x100	Cu x100	N x10000	TS N/mm ²	YS N/mm ²	EL %	RA %	HRB	HRC	
31049		3/4"	69	1254	5.6	27	184	27	328.4	927	1810	11	35	221	710	535	33	46	97	417163008	
OK397		3/4"	68	1239	5.9	24	193	28	229.4	803	1765	17	74	353	733	603	33	40	95	417163009	
Total:				2493																	

TOLERANCE: M44

Acc. to ASTM A360-12 Cond.A.

Acc. to ASTM A36 type 1/30-0-7163 chemistry only.

LENSES TOLERANCE: 0-50

This inspection certificate is issued according to EN 10204 2.3

Remark:

Melted manufactured : Taiwan , Improved machining.
Solution annealed treatment: Acc. to ASTM A364.

SUPPLY CONDITION:

A:Annealed
B:Steel Block
C:As Casted
E:Polished/With Pass
H:Precipitation Hardening
M:Hot Roll
F:Annealed
K:Cut Edge
L:Polished
M:Cold Roll
P:Painted
S:Shaved
V:Var
W:Cut
X:Temper
G:Gold Draw
C:Centrifuge Ground
P:Turned or Pealed

We have the following certification:

1.ISO9001:2015 Quality Management System
2.ISO/IEC 17025:2005 Laboratory Management System
3.IPD & AD2000-Material WD
4.DNV - LR - ABS Classification Society certification
5.ISO14001:2004 Environment Management System
6.GRSAS 16001:2007 & TOSMSAS Certificate

1. We hereby certify that material described herein has been manufactured and tested with satisfactory results in accordance with requirement of the above material specification.
2. We certify that the material is free from mercury and radiation contamination. Qualification No. of Taiwan Atomic Energy Committee: 136
3. The Above Testing Results Relate Only To The Items Tested.
4. No welding repaired

TEST METHOD :
CHEMICAL-ASTM E1806, E413, E1086, E1019

SL Kuan,
Quality Assurance Responsible Personnel

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M303R0750 DATE: 17/06/21

PO / BATCH NO.: 900159/508186

MATERIAL CERT REC'D:	<input checked="" type="checkbox"/> Yes	THICKNESS ORDERED:	<u>.750"</u>
QUANTITY RECEIVED:	<u>7244</u>	THICKNESS RECEIVED:	<u>.750"</u>
QUANTITY INSPECTED:	<u>7244</u>	SHEET SIZE ORDERED:	<u>—</u>
QUANTITY REJECTED:	<u>0</u>	SHEET SIZE RECEIVED:	<u>—</u>

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/> Y	
CORRECT FINISH	<input checked="" type="checkbox"/> N	
CORROSION	<input checked="" type="checkbox"/> Y	<u>(N)</u>
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y	N
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y	N
PHOTO REQUIRED	<input checked="" type="checkbox"/> Y	<u>(N)</u>
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y	N
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y	N
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y	N
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/> Y	<u>(N)</u>
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/> Y	<u>(N)</u>

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> <small>DAS</small>	SIGNED OFF BY: _____
DATE: <u>19/06/21</u> <small>9:30</small>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 303 SS ROUND BAR
(NOTE: AISI 304/316 NOT ACCEPTABLE)

B SPECIFICATION: **ASTM A562**

PART NUMBER: **M303R[D,DDD]**
[DIA.]

WHERE "D,DDD" = DIAMETER IN INCHES
EG. 0.75" ROUND BAR = M303R0.750

RELEASED
2010-02-02
NO

B	REFORMAT DWG, ADD SPECS (ZN D8-1), REF PAR 08-020A	CP	10.01.05
A	NEW ISSUE	DS	01.12.20
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>JP</i>	DART AEROSPACE LTD	
DRAWN	<i>JP</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>JP</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>JP</i>	M303R	SHEET 1 OF 1
APPROVED	<i>JP</i>	TITLE	SCALE
DE APPR.	<i>JP</i>	303 ROUND BAR	NTS
DATE	10.01.05	COPYRIGHT © 2001 BY DART AEROSPACE LTD. THIS DOCUMENT CONTAINS TRADE SECRET INFORMATION WHICH IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN APPROVAL FROM DART AEROSPACE LTD.	